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United States  
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Agriculture

Economic  
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# World Food Needs and Availabilities, 1988/89: Spring

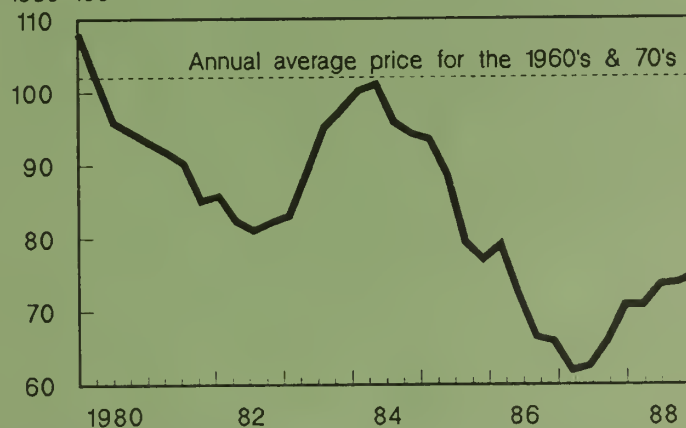
Part 4

1988/89  
18.18.89

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## Developing Country Commodity Prices Still Low, But Improving

1980=100



Nominal nonfuel commodity prices deflated by merchandise export prices  
for industrial economies.



## Preface

The food need levels reported are for the marketing years 1988/89 and 1989/90. As with any projection, assumptions must be made about future events. The assessment of food needs is based heavily upon projections of food crop production and financial ability to commercially import food. Food production is subject to the vagaries of weather and commercial import capacity is influenced by various international commodity and financial market conditions. Since neither weather nor international markets can be predicted with certainty, the food needs contained in this report are subject to change.

To reflect current crop conditions and import capacity, countries are analyzed quarterly, in the season in which current crop information is available. The May issue updates food needs for those countries judged to be facing conditions significantly different from those at the last assessment. For this reason, readers are encouraged to acquire current reports to keep abreast of changing food needs. Readers are further advised that both the methodology and the data used in the calculations are continually being refined by the Interagency Food Aid Analysis Working Group (IFAAWG). This effort reflects the continuing commitment of the U.S. Government to respond more rapidly and adequately to the needs of those countries where food commodity assistance can be used for humanitarian purposes and in the mutual interests of the recipient country and the U.S. Government.

As a result of a Presidential Initiative in the summer of 1984, an Interagency Food Aid Analysis Working Group was established to provide the U.S. Government with the best possible food needs assessment for countries in the developing world. This report is prepared under the aegis of the Interagency Working Group.

As assessment of world food needs has serious implications for both donor and recipient countries, and it has the potential to influence the expenditure of many millions of dollars and affect the lives of many millions of people. It is, therefore, very important that readers clearly understand the issues that the Food Needs and Availabilities report addresses, and those it does not. This report is not an allocation or programming document, but an objective analytical assessment of food needs. Allocation and programming decisions are made in other forums and consider factors in addition to the food needs assessed in this report.

The assessment of food needs presented herein refers to the *amount of food needed* to cover the difference between a country's domestic food production plus its commercial import capacity, and either of the following two alternative measures of food need.

The *status quo* need is based on a country's recently achieved levels of food consumption, while the *nutrition-based* need is based on FAO's published information on minimum recommended dietary intake for each country. In addition, an estimate is made of the maximum absorbable imports if the highest historical levels of per capita total food use and carryover stocks were to be maintained. This assumes the food delivery systems in most food-aid-recipient countries have been "at capacity" at the highest historical level. None of these measures, taken individually, adequately reflect the range of objectives embodied within P.L. 480 legislation, nor does any one measure capture all factors considered in allocation and programming decisions.



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## Foreword

This is the fourth report in the *World Food Needs and Availabilities* series for 1988/89. It presents final adjustments on Egypt, Tunisia, India, and Sri Lanka. Complete updates have been done on these countries. Estimates of 1988/89 and 1989/90 regional food needs are based on analysis of the 55 food-deficit countries throughout the June 1988 - May 1989 reporting period. This issue includes a special section on the implications of the 55 countries' financial situation for their food assistance needs.

*World Food Needs and Availabilities* serves both the requirement of P.L. 480, as amended, that "global assessments of food production and needs" be submitted to the Congress, and the food needs analysis function of the Interagency Food Aid Analysis Working Group. Information provided through these reports to the Executive Branch and the Congress is employed, along with other information, in considering fiscal 1989 and 1990 food aid budget allocations. The reports are intended to provide detailed updates on food supplies and additional food needs both country-by-country and in aggregate. This information is also useful to program and policy officials within donor governments and food-aid recipient countries, analysts in international organizations and universities, and private agencies involved in food aid distribution.

This report presents two alternative measures of the overall food import requirements and the additional food needs of each country for 1988/89 and 1989/90. The *status quo* and *nutrition-based* assessments are based on two different sets of normative judgments and assumptions regarding the role of additional food and the considerations that might govern its use. For a detailed explanation of the two measures, see "Measures of Additional Food Feeds--Conceptual Framework" on page 15.

The most current weather, crop production, and financial data were employed in making 1988/89 assessments. The 1989/90 assessments are based on projected agricultural production, trade, and general

economic trends evident when each country analysis is done. Estimates of 1990 U.S. export unit values are those available in July, 1988. Estimates of commercial food import capacity are based on historical and projected foreign exchange availability, assuming continuation of recent debt payments. The share of this exchange allocated to imports is determined by the average value of commercial food imports in the past 3 years. Significant changes in debt payment performance would alter food import capacity and additional food needs.

Neither the status quo nor the nutrition-based measure deals specifically with the ability of countries' infrastructure to absorb food aid without overloading port and transportation capacity and storage and distribution systems. Food import absorption problems sometimes limit the quantity of assistance that can physically be provided. The gap between maximum absorbable and nutrition-based food needs is one measure of the seriousness of a country's food problem. In a very real sense, this measure captures the magnitude of the task of achieving the financial and physical capacity to import food, or increasing domestic food production consistent with national food demand.

The import requirements and additional food need estimates in *World Food Needs and Availabilities* reports are based on national agricultural and economic data. These estimates assist financial and logistics planning by both donor and food aid recipient countries. It should be apparent, however, that additional food need levels are only a part of the calculus, and that delivering imported food to communities deprived by national food production shortfalls or civil disturbances is a major undertaking. Factors bearing on success include local transportation and communications infrastructure, the financial status of both local and national public service agencies, and the availability of international financial support.

Ray W. Nightingale  
Food Needs Analysis Coordinator

## Acknowledgments

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and Mark Smith.

Interagency Food Aid Analysis Working Group (IFAAWG) members contributed in food needs assessment workshops. The Agency for International Development (AID) cleared the report. Tom Ross, AID Office of Food for Peace, and Michele McNabb from the AID/Food Needs Assessment Project assisted in the review. Dee Linse reviewed the report for the Foreign Agricultural Service, USDA.

## Abstract

Cereal equivalent production of cereals and roots and tubers in 55 food-aid recipient countries in 1988/89 is up 13 percent from 1987/88. While some countries consequently have little or no cereals shortfall, higher commodity prices and the need to rebuild

stocks has sharply increased needs in others, with the result that total cereal needs continue high. The magnitude of cereal needs in 1989/90 depends heavily on weather and economic developments in coming months.

## Summary

The detailed country tables and narratives in this report include information on the quantities and dollar values of assessed additional food needs, including the needs for cereals and cereal equivalent of roots and tubers, pulses, and vegetable oils. This summary covers only additional needs for cereals and roots and tubers in cereal-equivalent.

The February 1989 issue of *World Food Needs and Availabilities* completed the analysis of food needs in the 55 countries currently covered. This report updates four countries: Egypt, Tunisia, India, and Sri Lanka. The summary table reflects resulting changes in the North Africa and South Asia regions. The changes are relatively minor and, with

the few exceptions noted below, the world food needs situation remains as presented in the February report.

There are some indications that the overall financial situation of the 55 countries has improved, particularly when viewed against past performance and recent expectations. But these countries' financial positions remain decidedly poor. Export earnings have improved, because of better-than-expected growth in the industrial countries, and prices for exported commodities are up. But countries have continuing problems with debt repayment, compounded by rising interest rates. Also, some export commodity prices which showed strength in 1988 may have peaked, and oil import costs have now turned strongly upward.

Approved by the World Agricultural Outlook Board and summary released April 21. The next summary of *World Food Needs and Availabilities* is scheduled for release on August 7, 1989.



High world cereal prices have increased the cost of commercial cereal imports. However, the impact on status quo and nutrition-based food needs varies greatly among countries and regions.

The only significant 1988/89 cereals production decline among the countries analyzed here is in Tunisia. Cereal output in the 55 countries is expected to be 326 million tons, up 13 percent from 1987/88. While some countries consequently have little or no cereals shortfall, higher commodity prices and deteriorating financial conditions have sharply increased needs in others, with the result that cereal equivalent needs continue high.

#### Cereal Needs in 1988/89 in Comparison to 1987/88

Status quo additional cereal needs for 1988/89 consumption requirements are estimated at 14.4 million tons, 11.7 million below 1987/88. Stocks-adjusted additional cereal needs, 17.1 million, are 2.4 million under the assessment for 1987/88. Nutrition-based needs are 29.4 million tons.

This update reduces 1988/89 status quo needs in North Africa by 800,000 tons to 3.8 million and increases South Asian needs by 100,000 tons to 3.2 million. Stocks-adjusted status quo needs in North Africa are down from 5.3 million tons to 4.5 million. Nutrition-based needs, including stocks adjustment, are down in North Africa by 1.5 million to 1.2 million, and in South Asia up by 500,000 to 17.4 million.

In Egypt, large gains in wheat and corn production more than offset a smaller rice harvest in 1988. But payments on Egypt's rapidly growing foreign debt, now \$47 billion, have exceeded debt servicing capacity and constrained food imports. Cereal production in Tunisia plunged 85 percent to only 275,000

tons in 1988. Rainfall during the winter of 1988/89 was also below normal and inadequate to replenish soil moisture or irrigation reserves. Cereals production in 1989 will be more than double 1988, but well below the 1984/85-1988/89 average of 1.4 million tons.

In India the 1988/89 kharif food grain harvests are higher than expected, further reducing already low assessed food needs. Sri Lanka's rice production during 1989 is estimated at 1.42 million tons, 15 percent below 1988 and the lowest output in a decade. Consequently, status quo consumption needs for 1989/90 are 248,000 tons, up 23 percent from 1988/89.

Additional cereal needs are unchanged in Sub-Saharan Africa, Southeast Asia, and Latin America.

Assessed status quo cereal needs are lower in 1988/89 in relation to cereals production and use, as are nutrition-based needs for consumption. But stocks-adjusted nutrition-based needs in relation to cereals use are unchanged.

#### Cereal Needs in 1989/90

For the 55 developing countries, status quo needs in 1989/90 are expected to drop by 2.1 million tons from 1988/89. The decline reflects improved production and less need to build stocks.

The magnitude of cereal needs depends heavily on weather and economic developments in coming months. Lower supplies and higher prices, for example, could mean higher import costs than currently projected. Then the 14-percent decline in shortfalls likely would not materialize.

Regional cereal situation and assessed additional cereal needs (million tons cereal equivalent) <sup>1</sup>

Region	Cereal equivalent production	Commercial import capacity	Status quo			Nutrition-based		Maximum 2 absorbable
			Total use	Import requirements	Additional needs for Consumption + stocks	Total use	Additional needs for Consumption + stocks	
1987/88 3								
Total	289.0	30.2	346.3	57.3	26.1	358.4	40.2	32.9
Percent of production					9.0		13.9	11.4
Percent of total use					7.5		11.2	9.2
1988/89								
Africa	75.1	11.4	89.8	14.7	7.0	96.0	10.7	12.1
North Africa	15.7	8.6	28.0	12.3	3.8	24.7	0.6	1.2
Sub-Saharan Africa	59.4	2.8	61.9	2.4	3.1	71.3	10.1	10.8
West Africa	14.3	1.3	14.8	0.5	0.6	17.2	1.8	1.9
East Africa	35.4	0.8	35.7	0.3	1.2	40.7	5.3	5.3
Southern Africa	9.7	0.7	11.4	1.7	1.3	13.4	2.9	3.6
Asia	243.4	5.4	252.9	9.5	5.0	266.6	15.7	17.8
South Asia	184.8	2.5	189.3	4.5	3.2	204.1	14.0	14.4
Southeast Asia	58.6	2.9	63.6	5.0	1.8	62.5	1.8	3.4
Latin America	7.4	1.3	10.9	3.5	2.4	11.8	3.1	3.1
Caribbean	1.2	0.4	2.3	1.2	0.7	2.4	0.7	0.7
Central America	3.2	0.2	3.7	0.6	0.5	4.1	0.7	0.8
South America	3.1	0.6	4.9	1.8	1.1	5.4	1.7	1.6
Total	326.0	18.1	353.7	27.7	14.4	374.4	29.4	33.1
Percent of production					4.4		9.0	10.6
Percent of total use					4.1		7.9	9.2

--Continued

*Regional cereal situation and assessed additional cereal needs (million tons cereal equivalent) - continued*

Region	Cereal equivalent production	Commercial import capacity	Status quo		Nutrition-based		Maximum absorbable			
			Total use	Import requirements	Additional needs for Consumption + stocks	Total use		Additional needs for Consumption + stocks		
1989/90										
Africa	73.5	13.9	92.5	19.0	6.6	7.7	98.3	12.9	13.6	12.3
North Africa	16.1	10.6	28.7	12.6	2.0	2.6	25.3	0.4	0.4	2.4
Sub-Saharan Africa	57.4	3.3	63.8	6.4	4.5	5.1	72.9	12.5	13.2	9.9
West Africa	13.6	1.5	15.2	1.7	0.6	0.7	17.5	2.4	2.5	2.1
East Africa	33.8	0.9	36.9	3.1	2.7	3.1	41.6	7.1	7.7	5.6
Southern Africa	10.0	0.9	11.7	1.7	1.3	1.4	13.8	3.0	3.1	2.2
Asia	248.1	7.0	258.4	10.3	4.6	5.0	272.5	11.5	13.7	12.3
South Asia	188.8	3.3	193.4	4.6	2.8	2.8	208.7	10.0	11.9	9.2
Southeast Asia	59.3	3.7	65.0	5.7	1.8	2.2	63.8	1.6	1.7	3.2
Latin America	7.8	1.5	11.5	3.7	2.2	2.3	12.3	2.9	3.0	2.9
Caribbean	1.2	0.5	2.4	1.2	0.7	0.7	2.4	0.6	0.6	0.6
Central America	3.2	0.2	3.9	0.6	0.5	0.5	4.2	0.7	0.8	0.8
South America	3.3	0.8	5.2	1.8	1.1	1.1	5.7	1.6	1.6	1.5
Total	329.4	22.4	362.4	33.0	13.4	15.0	383.0	27.3	30.3	27.6
Percent of production					4.1	4.5		8.3	9.2	
Percent of total use					3.7	4.1		7.1	7.9	

- 1 Major cereals, and the cereal equivalent of shortfalls in root and tubers.
- 2 Imports consistent with maximum recent levels of consumption and food stocks.
- 3 1987/88 assessment, May 1988 *World Food Needs and Availabilities*.

## Food Aid Availabilities and Outlook

World cereal aid shipments for the current July 1988-June 1989 trade year are expected to fall from last season by 25 percent to about 9.8 million tons, the Food and Agriculture Organization (FAO) reports. This would be the sharpest percentage drop since the 42-percent decline in 1973/74, although the 9.8-million-ton figure approximates 1983/84 shipments. The decline is the second largest in both percentage and absolute terms in the 19 years of FAO's published statistics of aid shipments.

Wheat usually accounts for 70-75 percent of the volume of world cereal aid, and as world wheat prices have risen nearly 15 percent since July 1988 the volume that donors can provide from set food aid budgets has declined. While prices of corn and rice are generally below July 1988 levels, there is not a one-for-one substitution between these grains and wheat in terms of food aid. Corn is not an acceptable food grain in many countries, and accounts for only about 15 percent of global cereal aid. Rice is usually a more expensive food grain than wheat and accounts for only about 10 percent of world cereal aid.

In the United States, the October 1988-September 1989 fiscal year food aid availabilities are expected to be below fiscal 1988. Congress has approved a P.L. 480 program of about \$1.5 billion. While unchanged in dollar terms from fiscal 1988, the 1989 volume is estimated to be down more than 5 percent from prior years. For the Section 416(b) program, the Secretary of Agriculture has determined that about 900,000 tons of CCC commodities are available for 1989, down from about 1.8 million tons in 1988. The Section 416(b) program is contingent on the availability of CCC-owned commodities.

In the European Community (EC), the EC Commission announced a 1989 food aid program of about 715 million ECU (slightly more than \$810 million), involving volumes slightly higher than in 1988. About 1.36 million tons of cereals will be available, compared with 1.16 million tons announced March 1988 for the 1988 food aid program. (In August 1988, the EC made available another 200,000 tons cereal equivalent of

commodities to cover exceptional food shortages.) The estimated 1989 cost of cereals is slightly more than 300 million ECU (approximately \$345 million). Another 350 million ECU (nearly \$400 million) is expected for the donation of EC dairy products in 1989, about 94,000 tons of milk powder and 25,000 tons of butteroil. These volumes are unchanged from 1988. More than 55 million ECU (nearly \$65 million) is available for other products. The vegetable oil allocation (including olive oil) was increased by 18 percent to 40,000 tons, while the sugar allocation was increased almost 30 percent to 14,200 tons. A maximum of 200,000 tons (grain equivalent) of other products--such as meat and fish products and processed foods--is available, compared with more than 290,000 tons announced in March 1988. For the first time, peanuts will be available as EC food aid. All EC food aid is provided as a grant.

FAO reports that as of the end of calendar 1988, pledges to the World Food Program (WFP) for the 1987-88 biennium exceeded \$1.2 billion, but fell shy of the \$1.4-billion target. Pledging against a similar target for the 1989-90 biennium is underway. Pledges to the 1988 International Emergency Food Reserve, administered by the WFP, amounted to about 465,000 tons of cereals, short of the 500,000-ton target and much below the 1987 level of nearly 665,000 tons. About 90,000 tons of noncereals were also pledged for the 1988 program, compared with 60,000 tons for 1987.

As of February 1989, FAO reports that pledges of cereal aid to Sub-Saharan countries totaled slightly more than 3 million tons. Principal recipients were Mozambique, Sudan, and Malawi. Of the 3-million-ton total, 285,000 tons were pledged through triangular transactions and another 132,000 through local purchases. These subtotals are down slightly from 1987/88 levels of almost 500,000 tons, but are still much above the previous 5-year average. Triangular transactions and local purchases are expected to amount to about 15 percent of cereal aid provided to the region, a sharp jump from the 10-percent level over 1985/86-1987/88. Lower total food aid pledges to Sub-Saharan countries and relative growth in such transactions and purchases account for the increase.



## Additional Food Needs of Low-Income Countries

### Financial Situation in the Low-Income Countries

There are some indications that the overall financial situation of the 55 low-income food-aid-recipient (FNA) countries covered in this report has improved, particularly when viewed against past performance and expectations. For example, the foreign exchange available collectively for food import purchases (figure 1) is on the upswing. But, the improvement is not unambiguous, and must be viewed in light of the fact that these countries' financial positions will remain decidedly poor.

On the positive side are improved export earnings, due to better-than-expected growth in the industrial countries and improved prices for exported commodities. On the negative side are continuing problems with debt repayment, compounded by now rising interest rates. Additionally, oil prices, which had been weak, have now turned sharply upward. Overall, the prices of commodities exported by less developed countries (LDC's), after showing strength in 1988, may have peaked. Also, despite the improvement in their financial capabilities, the FNA countries face a higher cost for cereal imports.

In all, these countries remain quite poor, have restricted ability to purchase U.S. commercial food exports, and will continue requiring significant food or financial assistance.

#### *Industrial Country Growth*

By far the largest export markets for the FNA countries are the industrial countries, which take over three-quarters of what these developing countries export. The better-than-expected economic growth already delivered by the industrialized countries in 1987 (3.2 percent) and 1988 (remarkably, 3.9 percent) helped breathe life back into an export performance that was moribund for the first half of the 1980's (figure 2). During the first 6 years of this decade, the export earnings of the FNA countries contracted by an average of 1.2 percent annually. If current expectations are fulfilled and 1989 growth in the industrial countries does indeed exceed the forecast 3.0 percent, then the 8-percent growth in export earnings seen by FNA countries in 1987 could very well turn out to have been matched in 1988 and be at an equal level in 1989. Such export performance will help to resuscitate struggling economies and provide some breathing space vis-à-vis debt

repayment. But, there remains a real question of whether it is too little, too late, in light of the fact of at least a slowing in the rise in nonfuel commodity prices of LDC's, the upturn in interest rates and debt servicing obligations, and increased costs of cereal imports.

#### *LDC Commodity Prices*

In addition to the strong 1987 and 1988 economic performances by industrial countries, a strong upturn in 1988 real nonfuel commodity prices (figures 3-5), except beverages, helped boost export earnings in the FNA countries. By the end of 1988, overall real nonfuel commodity prices for the LDC's (as measured by the International Monetary Fund (IMF) commodity price series) had risen almost 25 percent from mid-1987's lows. Similarly, real prices for foods, agricultural raw materials, and metals ended 1988 some 28, 27, and 77 percent higher, respectively, than their recent lows. The exception proved to be real prices for beverages (coffee, cocoa, and tea), which have shown decided weakness, and currently are 50 percent below their recent average yearly high in 1984.

While the overall movement of nonfuel commodity prices is all well and good, indications are that the strong runup in these prices started to slow or level off in mid-1988 or early 1989 (depending on the individual index). Only marginal improvement in these prices can be expected for 1989, with beverages likely registering further declines. Moreover, as measured on the nonfuel commodities index, real prices remain well below most levels registered during the 1960's and 1970's.

Because of the recent sharp rise in metals prices, FNA metal-exporting countries--such as Bolivia, Zaire, and Zambia--seem poised to register stronger export earnings in 1988 and 1989. Even Peru, in severe economic crisis and experiencing a mining strike in late 1988, should find its position improved. However, beverage-exporting countries such as Kenya are unlikely to show any improvement in export earnings in 1988 or 1989.

Oil prices (figure 6), which had been falling since mid-1987 (when they were around \$18.00 per barrel), turned sharply upward starting in the final quarter of 1988. Prices moved from near \$10.00 per barrel early in the last quarter of 1988 to around \$18.00 at

the end of the first quarter of 1989. This movement was initiated by OPEC's thus-far-successful attempt to reduce its production. In addition, non-OPEC oil producers have jumped on the lower-production bandwagon, and demand has been up. This initiative could well last through 1989 and 1990, with prices remaining at \$18.00 per barrel or a bit higher.

While this should prove a great boon to the export earnings and financial prospects of oil-exporting countries such as Indonesia and Egypt, the overall effect for the food-aid countries covered here would be negative. The majority of these low-income countries appear likely to face significantly higher near-term increases in their resource and import costs.

#### *Cereals Import Prices*

While the rise in commodity prices is good news for the export earnings of the FNA countries, it should be no surprise that they have also been confronted by rising prices for the commodities they import. Of principal interest to this report are the prices for cereals, which are estimated to have risen more than 40 percent in real terms since the third quarter of 1987 (figure 7). Partially as a result, these countries' import bills are expected to rise some \$7.0 billion in both 1988 and 1989.

#### *Debt*

Debt poses a significant threat to the food-recipient countries' financial position. That threat has greatly intensified with the recent surge in interest rates engendered by monetary tightening, principally in the United States. The 6-month London Interbank Offer Rate (LIBOR) on dollar-denominated assets, a key rate for LDC debt, moved upward from near 8 percent in late 1987-early 1988 to around 11 percent near the end of the first quarter of 1989 (figure 8). Additionally, the stock of debt in these countries continues to grow. There is, therefore, a clear indication that debt service burdens will intensify, and that high debt-service ratios (now around 25 percent of exports) will remain. Moreover, international reserve positions will be more difficult to defend. These problems are particularly acute in Peru, where, for example, reserves had fallen to just \$500 million by mid-1988 (just 7 percent of 1988 imports), from \$2.1 billion a year earlier.

In summary, the financial position of the FNA countries, as well as their ability to import foods, should be somewhere on the improved side in 1988 and 1989. But, because of their poor initial condition, and the growing cost of cereal imports, their ability to import foods will continue to fall well short of needs.

Selected financial data for the FNA countries, 1985-1986, 1987 estimates and forecasts for 1988 and 1989

Region and subregion	Imports of goods and services					Exports of goods and services				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	\$ billion					\$ billion				
Africa	36.4	37.8	40.4	41.5	42.5	31.1	31.3	32.1	33.2	34.3
North Africa	21.0	21.1	22.2	23.5	24.1	17.3	16.7	17.7	18.4	19.0
Sub-Saharan Africa	15.4	16.7	18.2	18.0	18.4	13.8	14.6	14.4	14.9	15.2
Asia	58.3	58.0	64.5	70.7	76.5	53.4	51.8	58.6	65.1	71.4
Southeast Asia	22.6	22.2	24.5	26.8	29.1	27.2	23.8	27.1	30.0	33.2
South Asia	35.7	35.9	40.0	44.0	47.4	26.2	28.0	31.5	35.1	38.2
Latin America	16.1	17.5	18.4	18.4	18.5	12.3	12.2	12.5	13.0	13.3
Caribbean	4.2	3.9	4.3	4.3	4.3	3.0	3.1	3.3	3.2	3.3
Central America	6.8	6.8	7.5	7.9	8.0	4.7	4.9	4.9	5.4	5.5
South America	5.0	6.8	6.5	6.2	6.3	4.7	4.1	4.3	4.4	4.5
Grand Total	110.8	113.4	123.3	130.6	137.5	96.8	95.4	103.2	111.3	119.0
	Yearend reserves					Debt service				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	\$ billion					\$ billion				
Africa	4.2	5.0	5.7	5.2	5.4	7.1	8.1	9.5	7.9	8.3
North Africa	1.1	1.3	2.3	2.0	2.1	4.2	4.6	5.1	4.8	5.2
Sub-Saharan Africa	3.1	3.6	3.4	3.3	3.3	2.9	3.4	4.4	3.1	3.2
Asia	14.5	14.8	15.2	14.6	15.4	13.2	16.1	17.8	18.7	19.3
Southeast Asia	5.6	5.8	6.6	6.4	6.7	6.8	7.5	8.6	9.1	9.5
South Asia	8.8	9.0	8.6	8.2	8.7	6.5	8.6	9.2	9.7	9.8
Latin America	3.7	3.4	2.2	2.0	2.1	2.7	2.5	2.4	2.8	2.8
Caribbean	0.5	0.5	0.3	0.3	0.3	0.6	0.7	0.7	0.7	0.7
Central America	1.2	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.4	1.4
South America	2.0	1.6	0.7	0.6	0.6	0.9	0.7	0.6	0.7	0.8
Grand Total	22.4	23.1	23.1	21.9	22.8	23.0	26.6	29.7	29.4	30.5

Source: ERS

Figure 1

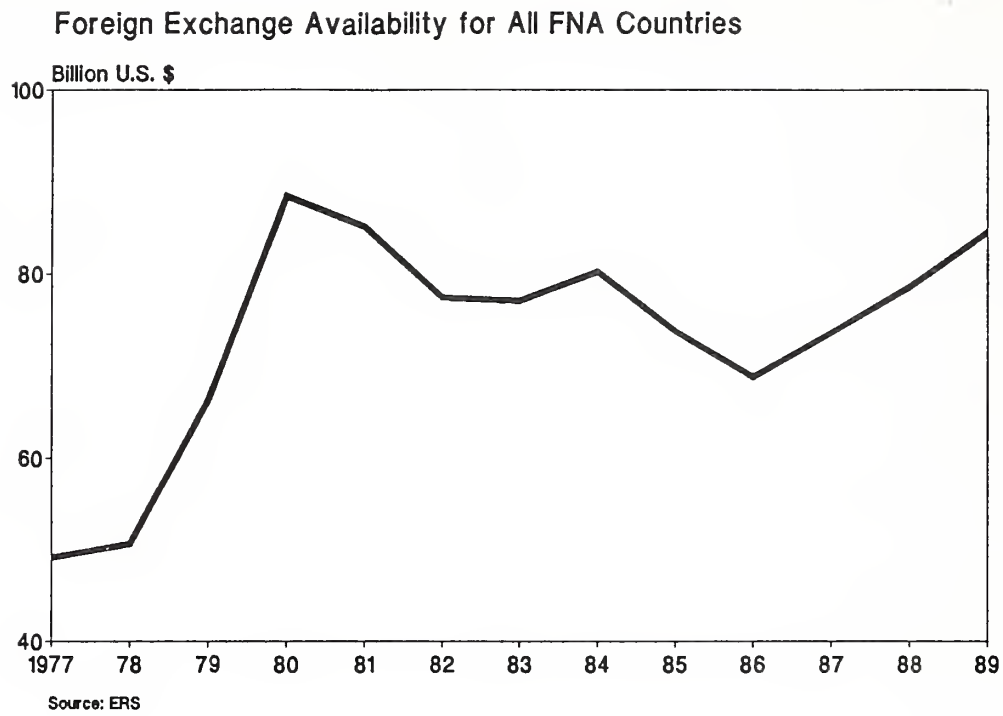


Figure 2

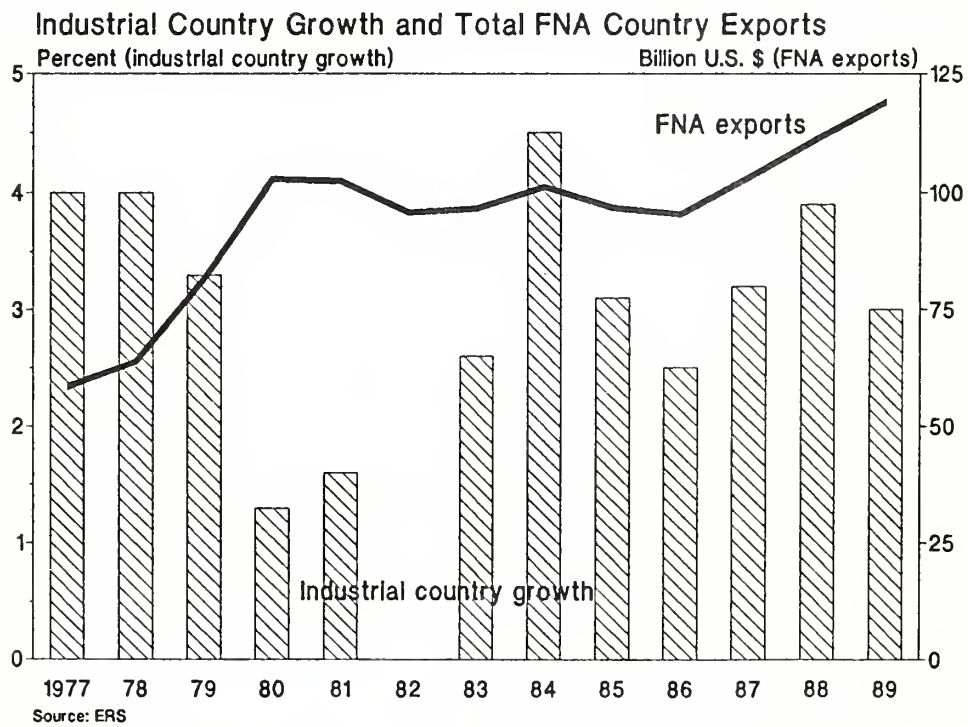




Figure 3

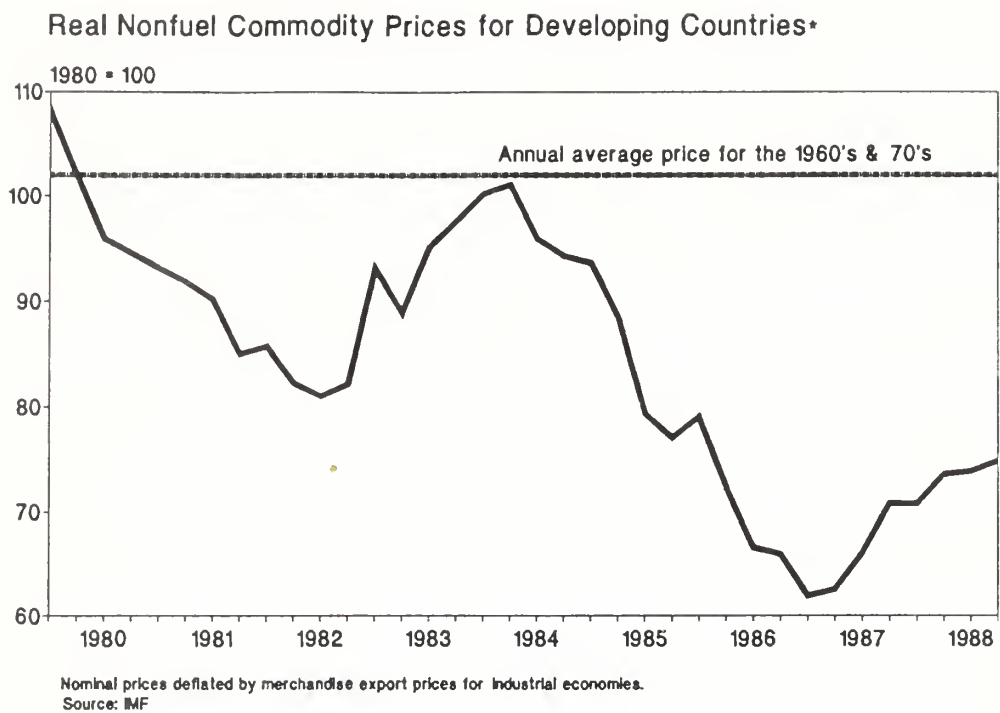


Figure 4

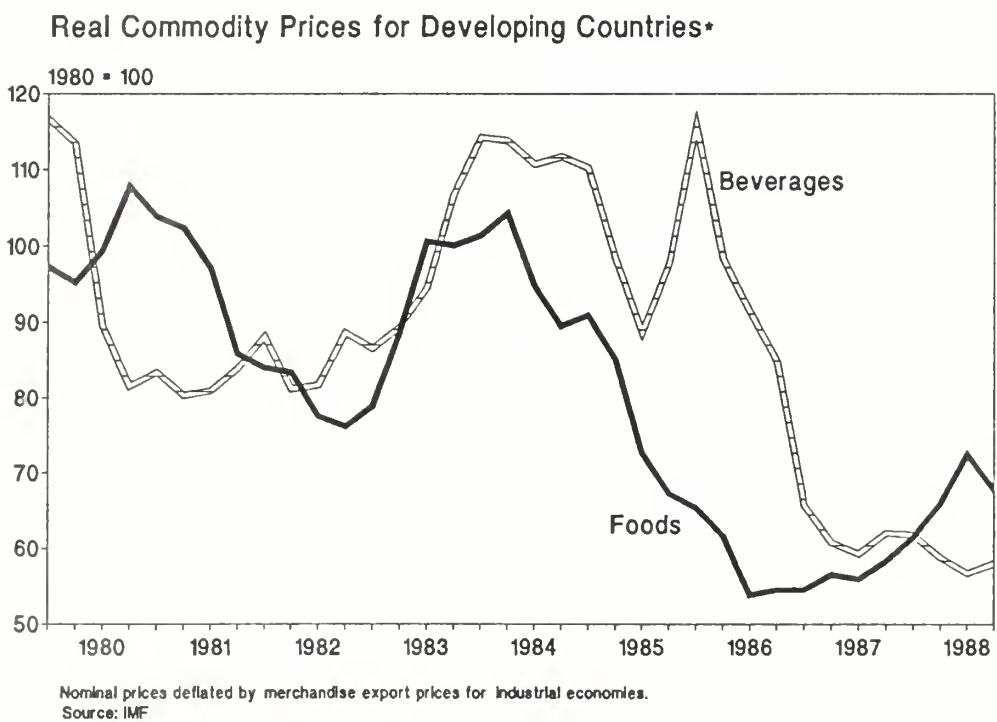


Figure 5

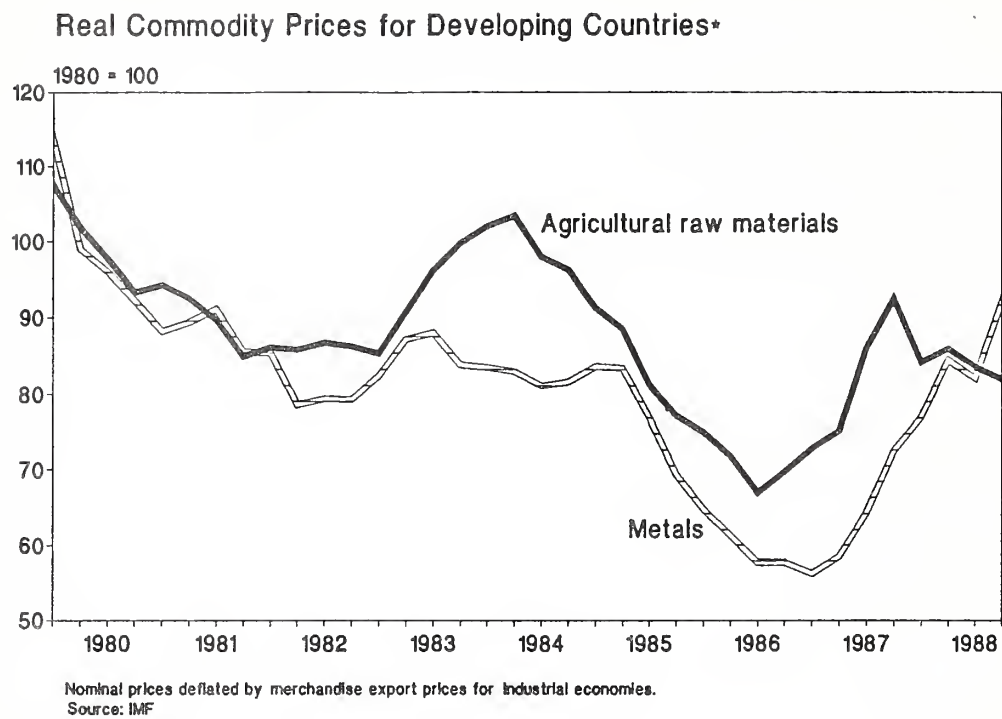


Figure 6

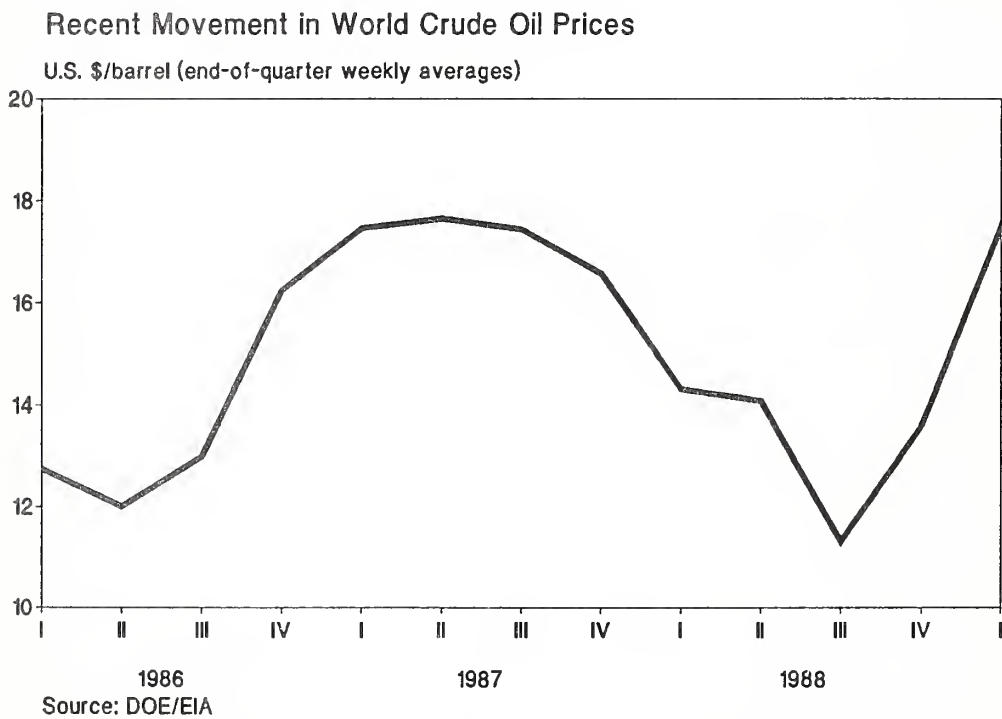


Figure 7

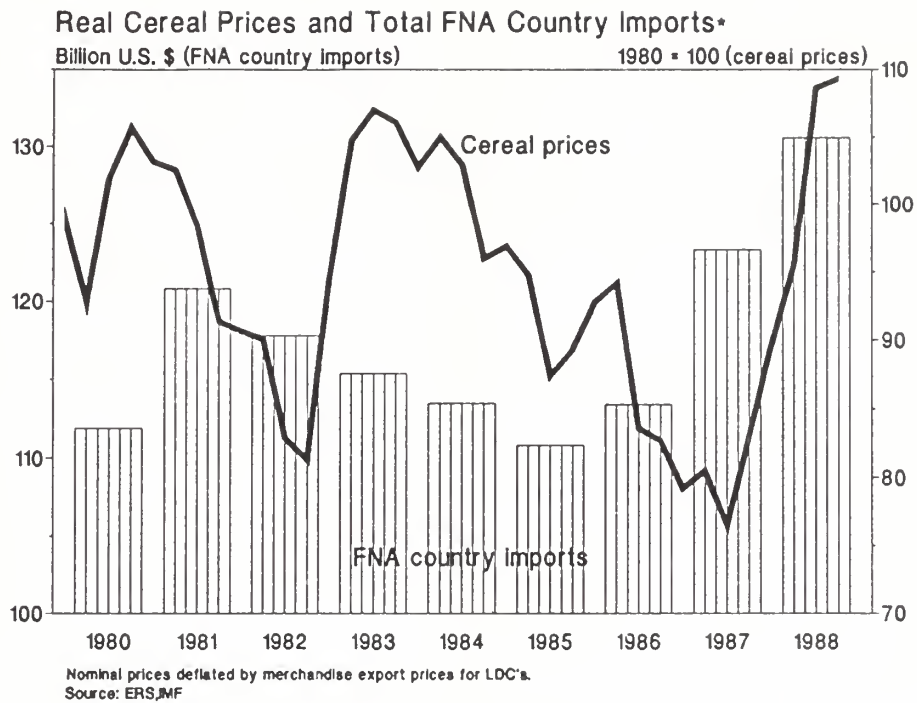
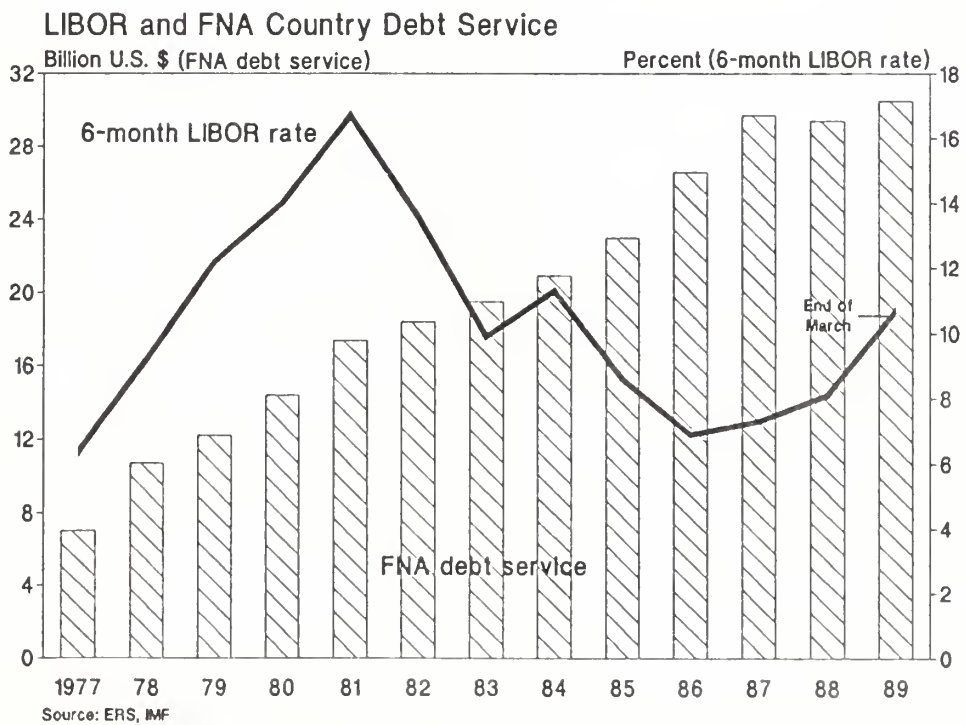


Figure 8



## Measures of Additional Food Needs--Conceptual Framework

Financial indicators and food and agriculture data are used to generate two alternative measures of food needs in addition to estimated commercial import capacity. These measures reflect the choice countries must make between making extraordinary commercial purchases and seeking food aid. Large commercial imports, particularly in successive years, would be at the cost of other imports, including those of development goods. In addition, a measure is computed of the maximum quantities of commodities that countries could feasibly import. Each measure highlights a different aspect of the food problem in low-income countries, and a different notion of the role food assistance might play in easing the problem. For a more detailed discussion, see the Methodological Notes in the August issue of *World Food Needs and Availabilities*.

The first measure, termed "status quo," estimates the additional food needed to maintain per capita use of food staples at levels reported in recent years. Status quo food needs assessments are stabilized by the method of estimating per capita food use during a base period. Base period food use is calculated as the mean of the most recent 4 years within one standard deviation of the mean of the most recent 8 years. The method is explained in Methodological Notes, published in the summer issue. This per capita food use is called base-use in the following descriptions of tables and elsewhere in this report. The years employed in calculations are 1980/81 through 1987/88. No provision is made for improving substandard diets, for reducing allocations to countries where diets are relatively good, or for correcting problems related to the uneven distribution of food across or within countries. Because status quo estimates support a level of per capita availability that has been achieved in the past, in most cases they can be considered to be consistent with countries' ability to absorb food imports.

The second measure, termed "nutrition-based," estimates the additional food required to raise per capita caloric intake to meet FAO's recommended minimum requirements. This measure is based on the notion that food aid might be utilized in a way consistent with nutritional need rather than to maintain a recent, possibly substandard, status quo. In this sense, the nutrition-based measure might be viewed as a maximum additional food need, but is not necessarily consistent with a country's ability to absorb food imports.

The measure of food import feasibility called "maximum absorbable imports" provides a basis for assessing what quantity of additional food might be imported to help meet large nutrition-based food needs, or possibly building stocks in a period of ample world food supplies. The implicit assumption is that the food delivery systems of many of the countries involved have been fully loaded by past high consumption. In addition, the highest level of stocks maintained over the previous 8 years is assumed to be the largest level that can currently be maintained. The estimate is intended to provide a crude measure of the amount of food that can be physically absorbed. This level may then be used to scale back nutrition-based additional food need estimates that may be beyond the physical limits of a country's transportation, distribution, and storage capabilities.

While the status quo and nutrition-based methods differ in their estimation, they have a common structure. In each, an estimate of a country's domestic supplies of food staples is subtracted from an estimate of staple food requirements to arrive at an estimate of import requirements. These are then totaled for food groups, based on assumptions regarding their substitutability. An estimate of a country's capacity to commercially import food in each category is then subtracted from the import requirement to arrive at an estimate of additional food needs. Estimated import unit values for each food group are used to generate import requirements and additional food needs estimates in both quantity and value terms.

Several factors affecting additional food needs are not addressed in these estimates. First, food distribution problems--both geographical and across income or population groups--are overlooked by national-level food availability and country-average requirement measures. These can mask acute shortages in specific places within a country and uneven distribution of food across population groups. However, measuring the unevenness of food distribution is extremely difficult, because data are not available. Acute problems of this nature are treated qualitatively in the country narratives.

Second, additional food needs are estimated without reference to a country's food and agriculture policies and current performance. Although these issues figure importantly in a country's choice between exceptional commercial food purchases and concessional food imports, a comprehensive consideration of them is beyond the scope of this report.



## Introduction to Country Tables

The following section reports on the food and financial situation and outlook for 55 countries in Africa, Asia, and Latin America. The materials summarize events during the 1987/88 local marketing year (generally July-June) and project food and financial conditions for 1988/89 and 1989/90.

Data shown in the tables must be interpreted with caution. Forecasts of food production, population, and financial conditions for 1988/89 and 1989/90 represent ERS's forecasts of what is likely to happen during those years. But 1988/89 and 1989/90 estimates of all other items--stocks, use, import requirements, and additional needs--are not forecasts of what is likely to happen; they are estimates derived using the status quo and nutrition assumptions summarized in the previous section and explained in detail in the Methodological Notes section of the August 1988 report. Additional food needs calculations are also subject to a number of adjustments detailed in the August report.

In each of the country tables, any quantity less than 500 tons and any value less than \$500,000 are shown as zero.

### *Tables Entitled "[Country] basic food data"*

These tables provide food staple supply and utilization data for 1980/81-1987/88 and for forecast years (1988/89 and 1989/90). An explanation of each column heading follows:

1. Actual or forecast production--actual production for the individual staples for 1980/81-1987/88, and forecast production for 1988/89 and 1989/90.
2. Net imports--actual net imports during 1980/81-1987/88. Net import figures for forecast years are not supplied. Instead, estimated import requirements based on status quo and nutrition-based approaches are provided in the next set of tables.
3. Nonfeed use, 1980/81-1987/88.
4. Feed use--actual feed use, 1980/81-1987/88, and targeted feed use for 1988/89 and 1989/90. Targeted feed use is calculated to maintain per capita feed use at base-use levels. The same base level of feed use is employed in the status quo and nutrition-based estimates of aid needs.
5. Beginning stocks--actual stocks for 1980/81-1987/88, where reliable stocks data are available. Initial calculations of status quo and nutrition-based import and aid needs are done by maintaining the ending stocks for 1987/88 (beginning stocks for 1988/89) constant throughout the forecasting

period. Import requirements for building food security stocks are calculated subsequently for the countries for which stock data are available.

6. Per capita total use--actual per capita human consumption and livestock feed use for 1980/81-1987/88.
7. Commodity coverage--the food staples included for each country.
8. Share of diet--each staple's share of total daily caloric intake, and the share of total daily caloric intake covered by the food staples analyzed. Data are drawn from the 1979-81 FAO Food Balance Sheets, with adjustments made in some cases for differences in FAO or ERS estimates of feed use or more recent significant changes in a staple's share of the diet.

### *Tables Entitled "Import requirements for [Country]"*

These tables deal only with 1988/89 and 1989/90 estimates. An explanation of each column heading follows:

1. Forecast domestic production--data are drawn from the "basic food data" tables.
2. Total use, status quo--total amount of a staple needed to maintain per capita human consumption at the base-use level and feed use at the targeted level.
3. Total use, nutrition-based--the amount of a staple needed to support daily per capita caloric intake levels at the FAO recommended minimum, plus targeted feed use.
4. Import requirements, quantity, status quo--the imports of a staple required to maintain per capita consumption, and also to achieve the targeted levels of feed use with no change in stocks, as shown in the basic food data table. These estimates are calculated for each staple by subtracting forecast domestic production from status quo-based total use.

Subtotals for each commodity group are calculated by summing the import requirements for individual commodities. Calculated surpluses (negative import requirements) for individual commodities within groups are subtracted from deficits in other commodities, because foods are assumed to be substitutable within groups. Noncereals such as roots and tubers are converted to caloric wheat equivalents before being summed. Negative subtotals are shown as zeros because these calculated surpluses are assumed not to be substitutable elsewhere in the diet.

5. Import requirements, quantity, nutrition-based--the imports of a staple required to support recommended minimum per capita caloric intake and targeted feed use, as no change in stocks is shown in the basic food data tables. These estimates are calculated by subtracting forecast domestic production from nutrition-based total use. Totals for each commodity group by year are computed as described in (4) above.
6. Import requirements, maximum--the largest quantity that could be managed if countries wished to take the greatest advantage of low grain prices to improve stocks or to improve on the nutritional status of the population.

*Tables Entitled "Financial indicators for [Country], actual and projected"*

These tables give historical data and forecasts for four key financial indicators: yearend international reserves, merchandise exports, merchandise imports, and debt-service obligations. All data are on a calendar year basis and are compiled from a variety of sources, including the World Bank, the International Monetary Fund, Chase Econometrics, country sources, and ERS estimates.

*Tables Entitled "Additional food needs for [Country], with stock adjustment and as constrained by maximum absorbable imports"*

These tables provide calculations of cereal import requirements and food needs in excess of normal commercial imports, resulting from consumption requirements and from estimates of cereal stock adjustments required for food security. The estimated stock increment (quantity and value) is added to import requirements, and additional food needs to support consumption, to arrive at total import requirements and additional food needs. The

stock increment is shown only when it results in altered total additional food needs (i.e., when not offset by negative additional food needs for consumption). For a discussion of how stock increment estimates are calculated, see Methodological Notes.

1. Commercial import capacity--an estimate of the amount of food within each group that a country can afford to import without reducing below historical levels the share of its available foreign exchange used for nonfood imports. Countries are assumed in forecast years to spend the same proportion of available foreign exchange on commercial food imports as in the base period. The measure is sensitive to historical and projected levels of foreign exchange holdings, total merchandise imports and exports, and debt service. The measure is provided in both quantity and value, using the same country-specific estimates of unit import costs as in the import requirements estimate.

2. Additional food needs, quantity--the estimated quantity of additional food needed in each commodity group to support either the status quo or nutrition-based use level and targeted stock and feed use levels. Negative needs are shown as zero.

3. Additional food needs, value--the estimated value of additional food needed in each commodity group to maintain either status quo or nutrition-based consumption and stock and feed use levels.

## North Africa

### Egypt

Cereal production is estimated to have increased more than 4 percent in 1988, primarily because of higher corn and wheat yields and farmers' response to substantially higher prices. Large gains in wheat and corn production more than offset a smaller rice harvest. Primarily because of a 10-percent decline in output of livestock products, total agricultural output showed little change in 1988 after increasing about 4 percent annually during 1985-87. New import regulations caused shortages of imported feed corn, causing livestock sector output to decline. Concern about the rapidly escalating food import bill, which exceeded \$4 billion in 1988, led to changes in corn import policy, as well as the addition of 20 food items to the list of banned imports. Shortages of corn led to more feeding of domestic wheat and tightened availability of both corn and wheat for human consumption.

Status quo cereal import requirements for 1988/89 are now estimated at 9 million tons, about 8 percent lower than estimated in February because of higher production estimates. Nutrition-based import requirements are estimated to be lower at 6.4 million tons, indicating that current per capita consumption is above that needed to meet minimum nutritional requirements. Status quo per capita cereal consumption meets about 112 percent of minimum nutritional needs. Corn stocks have been depleted as a result of the tighter import policy, and import needs for stock building are estimated at 730,000 tons.

Payments on Egypt's rapidly growing foreign debt, which now totals \$47 billion, have exceeded debt-service capacity and constrained food imports. There is increasing pressure from multilateral and bilateral donors for policy reform, including reduction of producer and consumer subsidies, and liberalization of exchange rate, interest rate, and trade policies. A 1987 agreement

between Egypt and the International Monetary Fund (IMF) has been suspended because of the inadequate pace of reform, leaving Egypt unable to reschedule most of its 1989 debt-service obligations. The U.S. provides aid of \$2.3 billion annually, but is currently withholding \$230 million because of lack of significant reforms. France has also apparently suspended disbursement of new aid.

Egypt's capacity to import food commercially in 1989 will depend on the amount of debt rescheduling that is eventually negotiated. Debt rescheduling reduced 1988 payments from \$5.5 billion to about \$2 billion, and even with rescheduling 1989 payments are likely to be in the range of \$2-\$2.5 billion. The current assessment of the capacity to import food commercially in 1988/89 and 1989/90 is based on the assumption that there will be an agreement with major donors on debt rescheduling for 1989 and 1990. Based on this assumption, 1988/89 capacity to import cereal commercially is estimated at \$1.3 billion, or about 6.4 million tons of wheat. Import capacity in 1989/90 is estimated to rise to \$1.4 billion, or about 7.9 million tons of wheat. These assessments are highly dependent on the assumed levels of debt-service payments, and without a debt rescheduling agreement, Egypt's commercial import capacity would be sharply reduced.

Status quo additional food needs to support consumption are estimated at 2.6 million tons in 1988/89. Additional needs for stock building are just over 700,000 tons. Nutrition-based food needs are zero. The outlook for 1989/90 is for a sharp drop in additional food needs because of higher production and somewhat higher foreign exchange availabilities (assuming debt rescheduling). Status quo additional needs for consumption and stock building are projected to drop to 1.5 million tons in 1989/90, while nutrition-based needs likely will be zero.



*Egypt basic food data*

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
Major cereals	----- <u>1,000 tons</u> -----					<u>Kilos</u>	<u>Percent</u>	
1980/81	7,373	2,545	6,267	11,408	2,357	326	Wheat	36.9
1981/82	7,424	2,420	7,294	12,072	2,964	344	Rice	10.0
1982/83	7,714	2,102	7,017	11,857	3,419	339	Corn	16.0
1983/84	7,883	1,557	8,242	11,907	3,984	342	Sorghum	1.1
1984/85	7,788	1,791	9,018	12,484	4,592	358	Barley	0.2
1985/86	7,818	1,521	8,768	12,182	5,065	351	Total	64.2
1986/87	7,239	860	9,027	11,493	4,741	321		
1987/88	8,639	892	8,561	12,012	4,968	327		
1988/89	9,020	1,112						
1989/90	9,590	1,112						

*Import requirements for Egypt*

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition- based	Status quo	Nutrition- based	Maximum absorbable
	----- 1,000 tons -----					
Major cereals						
1988/89	9,020	18,028	15,418	9,008	6,398	11,360
1989/90	9,590	18,511	15,870	8,921	6,280	11,301

*Financial indicators for Egypt, actual and projected*

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- \$ million -----				Percent	
1980	9,307	9,745	1,411	1,046	7,896	14
1981	10,449	12,054	1,911	716	8,538	20
1982	10,091	12,385	1,905	698	8,187	18
1983	11,250	13,610	1,999	771	9,251	16
1984	12,237	14,451	2,352	736	9,885	18
1985	11,157	13,913	2,556	792	8,601	21
1986	10,000	13,850	2,400	829	7,600	16
1987	10,900	16,227	2,300	1,378	8,600	
1988	11,300	16,500	1,950	1,338	9,633	19
1989	12,300	17,000	2,250	1,378	10,342	19



*Additional food needs to support consumption for Egypt, with stock adjustment and as constrained by maximum absorbable imports*

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>
Cereal equivalent						
Consumption						
1988/89	6,408	1,331	2,600	540	0	0
1989/90	7,938	1,428	984	177	0	0
Stock adjustment						
1988/89			732	152	732	152
1989/90			503	91	503	91
Total						
1988/89			3,332	692	721	150
1989/90			1,487	268	0	0
Maximum absorbable						
Cereal equivalent						
1988/89			3,332	692	721	150
1989/90			1,487	268	0	0

## Tunisia

Cereal production plunged 85 percent to only 275,000 tons in 1988, when severe drought left Tunisia without reservoir water for irrigating wheat and barley. Wheat production fell 84 percent to 211,000 tons and barley output fell 88 percent to only 63,000 tons, both the smallest crops in recent history by a wide margin. Rainfall during the winter of 1988/89 has also been below normal and inadequate to replenish soil moisture or irrigation reservoirs. As a result, only a partial recovery is likely, with cereal production forecast at 680,000 tons, still well below the 1984/85-1987/99 average of 1.4 million tons. The 1989 wheat crop is forecast to more than double to 480,000 tons, while barley output more than triples to 200,000 tons.

Status quo cereal import requirements are estimated at 2.2 million tons in 1989, well above average annual imports of about 1.2 million tons. With improved but still low crop production in 1989, 1989/90 status quo import needs are forecast to remain relatively high, about 1.9 million tons. Nutrition-based import needs are estimated to be somewhat lower, 1.6 million tons in 1988/89 and 1.3 million in 1989/90, indicating that status quo imports would support per capita consumption above minimum nutritional needs. Status quo per capita cereal consumption covers about 132 percent of that needed to meet minimum nutritional requirements. The stock

adjustment calculation indicates that about 310,000 tons of 1988/89 import needs can be met by drawing down stocks.

Tunisia's balance of payments position and outlook are improving somewhat, despite the effects of drought. Total export earnings were up only about 4 percent in 1988, but they are likely to be up at least 10 percent in 1989 because of higher oil production and prices and steady gains in exports of light manufactures. Although debt-service obligations have risen to about \$900 million annually, Tunisia has a good debt-service record and maintains a good relationship with international lenders.

Using the procedure for calculating emergency commercial import capacity for 1988/89, because of the drought, yields an estimated capacity to import \$172 million of cereals commercially, or the equivalent of 1 million tons of wheat. Status quo additional cereal needs for 1988/89 are estimated at 1.2 million tons--falling to 900,000 tons if stocks are reduced by the prescribed amount. Nutrition-based additional needs are estimated at about 600,000 tons before stock adjustment and 300,000 tons after.

Additional food needs are expected to decline only slightly in 1989/90. Although import requirements to support consumption will be down, import needs for stock building are likely to be up. Commercial import capacity is projected to remain near 1 million tons. Lower projected world cereal import prices

will tend to boost import capacity, while a shift to a more typical allocation of foreign

exchange to food imports will tend to reduce estimated import capacity.

### *Tunisia basic food data*

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
Major cereals	----- <u>1,000 tons</u> -----					<u>Kilos</u>	<u>Percent</u>	
1980/81	1,166	211	816	1,590	402	308	Wheat	52.9
1981/82	1,234	201	1,142	1,730	627	356	Barley	1.9
1982/83	1,256	220	864	1,741	469	327	Corn	0.0
1983/84	922	130	1,283	1,699	526	323	Total	54.9
1984/85	1,024	110	1,100	1,707	502	314		
1985/86	2,067	25	852	1,791	873	369		
1986/87	607	280	1,542	1,859	460	314		
1987/88	1,898	110	1,201	2,002	579	341		
1988/89	275	628						
1989/90	681	628						

### *Import requirements for Tunisia*

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
		<u>1,000 tons</u>				
Major cereals						
1988/89	275	2,499	1,883	2,224	1,608	2,582
1989/90	681	2,556	1,985	1,875	1,304	2,242

### *Financial indicators for Tunisia, actual and projected*

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	<u>\$ million</u>				<u>Percent</u>	
1980	3,296	3,823	427	590	2,869	8
1981	3,616	4,117	520	536	3,096	7
1982	3,467	4,169	485	607	2,982	6
1983	3,292	3,906	569	567	2,723	8
1984	3,101	3,913	650	406	2,451	9
1985	2,970	3,606	676	233	2,294	7
1986	3,101	3,765	793	305	2,308	6
1987	3,489	4,096	930	525	2,559	
1988	3,630	4,340	850	450	2,815	9
1989	4,000	4,800	900	450	3,092	7

*Additional food needs to support consumption for Tunisia, with stock adjustment and as constrained by maximum absorbable imports*

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>
Cereal equivalent						
Consumption						
1988/89	1,005	172	1,218	208	603	103
1989/90	1,035	153	840	124	269	40
Stock adjustment						
1988/89			(310)	(53)	(310)	(53)
1989/90			7	1	7	1
Total						
1988/89			909	155	293	50
1989/90			847	125	276	41
Maximum absorbable						
Cereal equivalent						
1988/89			909	155	293	50
1989/90			847	125	276	41

## South Asia

### India

Current estimates of 1988/89 kharif food grain harvests are higher than previous assessments, indicating an even stronger rebound from the 1987 drought. Kharif crops are spring-planted, fall-harvested. Rice production is now estimated at a record 65 million tons, up 15 percent from 1987/88. Preliminary estimates from the Government of India suggest an even larger crop, which may be supported by the combination of excellent 1988 monsoon rainfall and favorable winter weather for the late-sown crop in eastern India. Coarse grain production is estimated by ERS to be up 40 percent to 30 million tons, but again is estimated to be substantially higher by the Indian Government.

The 1988 wheat crop is officially estimated at 45.1 million tons, near the preliminary assessments. Despite irrigation, persistent dry weather reduced plantings and led to a fourth consecutive disappointing wheat crop. Production of pulses, grown almost entirely on unirrigated land, was down 6 percent to 11 million tons because of dry winter weather. The 1989 wheat and pulse crops, to be harvested during April-May, are expected to be up sharply because of good weather and favorable prices. The wheat crop is forecast

at a record 49 million tons and pulse production at a near-record 13.5 million tons, and both of these forecasts could be raised.

Estimates of 1988/89 production of oilseeds and oils continue to be revised upward, with record crops expected from the combination of good weather, strong prices, and Government promotion efforts. Production of peanuts, the major oilseed, is forecast to rebound to a record 7.3 million tons, and record crops of rapeseed, soybeans, and sunflowerseed are also anticipated. Edible oil production during 1988/89 is estimated at a record 3.9 million tons, up 25 percent from the drought-affected 1987/88 outturn. The production recovery has eased the pressure on domestic edible oil prices and led to a sharp drop in Government allocations of imported oils to the vanaspati (hydrogenated oil) industry and the Public Distribution System (PDS) since late 1988.

Government stocks of wheat and rice have dropped sharply, from 23.6 million tons in December 1986 to 14.1 million in December 1987 and about 9.5 million in December 1988. December 1988 stocks consisted of about 4.7 million tons of wheat and 4.8 million of rice. December 1988 wheat stocks were the lowest since the mid-1970's and rice stocks the lowest since the early 1980's. The drop in Government stocks was the result of reduced domestic procurement from the poor 1987/88



harvests and record distribution of wheat and rice to stabilize open market prices and provide relief for drought-affected areas. Current stocks are roughly sufficient for operational needs if the good 1988/89 harvests reduce demand for subsidized grain from the PDS. However, buffer stocks, which are normally held at about 10 million tons, have been entirely depleted. Commercial imports of food grains to replenish stocks have, so far, been limited to about 2 million tons of wheat and 800,000 tons of rice. Despite very low stocks that threaten domestic price stability, the Government appears intent on minimizing imports because of an abnormally tight foreign exchange situation. A decision on additional imports is not expected until after the April-June wheat procurement season.

With the upward revision of production estimates, it is now estimated that no cereal imports are needed in 1988/89 to meet status quo cereal consumption. Nutrition-based import requirements are estimated at 8.5 million tons, reflecting a gap of about 6 percent between status quo per capita consumption and the nutritional target. The stock adjustment calculation indicates that about 3.0 million tons of imports are needed to begin rebuilding of the 10-million-ton buffer stock, although the Government may decide that a different level of stock building is consistent with food security needs. Also reflecting the production recovery, status quo edible oil import needs are now estimated at under 1.1 million tons in 1988/89, with nutrition-based needs down to under 1 million tons. Status quo and nutrition-based estimates of pulse import needs--both at 2.1 million tons--remain high because the drought-damaged spring 1988 crop will be the main source of domestic supplies during 1988/89.

Despite improved export performance in recent years, India's very tight balance-of-payments position is a serious concern to Indian policymakers and is being managed very carefully. The key problem is coping with the import growth associated with gradual import liberalization measures, together with rising debt obligations. In particular, the repayment schedule for a \$5 billion IMF extended fund facility during the early 1980's extends through 1990 and

includes large payments in 1988 and 1989. Revised data and forecasts of debt service indicate a substantially sharper increase in 1988 and 1989 total debt repayments than anticipated earlier. India's strong record of meeting debt obligations suggests that these payments will be made, leading to continued pressure on foreign reserves. So far, management of the situation has involved maintaining the modest trend toward liberalization of imports of industrial goods, but unusually strict controls on nonessential imports, including edible oils and food grains for stock building.

India's capacity to import food grains and edible oils commercially in 1988/89 is assessed at \$967 million, based on the calculation procedure for normal or good production years. With this estimate, additional status quo needs are estimated at about 700,000 tons of wheat for stock building, and 200,000 tons of pulses. Nutrition-based additional needs are estimated at 5.4 million tons of wheat and 1.9 million tons of pulses. However, because most of India's imports of food grains to offset the effects of the 1987/88 drought will actually occur in 1988/89, India's capacity to import food commercially in 1988/89 might be more appropriately calculated using the emergency import capacity procedure. With this procedure, commercial import capacity is calculated by allocating forecast foreign exchange availability to food imports based on the highest proportion that was spent on commercial imports since 1977. Using this approach, total capacity to import cereals, edible oils, and pulses in 1988/89 is estimated at about \$1.4 billion. With this estimate, 1988/89 status quo needs, including stock building, are reduced to zero, and nutrition-based needs are reduced to about 2.9 million tons of cereals.

Additional needs for all commodities are projected to fall in 1989/90, assuming normal weather. With normal weather, 1989 harvests of wheat and pulses should recover, while harvests of rice, coarse grain, and oilseeds achieve trend growth. Additional cereal import needs for stock building are possible in 1989/90, although this will depend heavily on how much stock building is actually achieved in 1988/89, as well as the size of 1989/90 harvests.



India basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
	<u>1,000 tons</u>					<u>Kilos</u>	<u>Percent</u>	
Major cereals								
1980/81	113,810	17,743	(835)	113,126	2,320	168	Wheat	18.5
1981/82	120,949	15,272	1,546	118,347	2,420	171	Rice	33.2
1982/83	112,446	17,000	3,477	112,409	2,420	160	Corn	3.1
1983/84	136,831	18,094	3,085	130,656	2,620	181	Sorghum	5.8
1984/85	135,261	24,734	(161)	126,828	2,620	172	Millet	5.2
1985/86	133,690	30,386	(605)	131,898	2,720	175	Barley	0.7
1986/87	134,041	28,853	(835)	135,570	2,710	176	Pulses	5.8
1987/88	119,605	23,779	610	129,422	2,491	165	Vegetable oil	6.3
1988/89	142,300	12,081					Total	78.7
1989/90	144,600	12,081						
Vegetable oils								
1980/81	2,668	180	1,293	3,981	0	6		
1981/82	3,392	160	962	4,434	0	6		
1982/83	2,974	80	1,259	4,163	0	6		
1983/84	3,376	150	1,697	4,833	0	7		
1984/85	3,775	390	1,357	5,172	0	7		
1985/86	3,306	350	1,204	4,560	0	6		
1986/87	3,298	300	1,525	4,753	0	6		
1987/88	3,151	370	1,920	4,991	0	6		
1988/89	3,925	450						
1989/90	3,900	450						
Pulses								
1980/81	8,572	0	173	8,595	150	13		
1981/82	10,627	0	128	10,605	150	15		
1982/83	11,507	0	150	11,507	150	16		
1983/84	11,857	0	300	12,057	100	17		
1984/85	12,893	0	200	12,993	100	17		
1985/86	11,962	0	300	12,212	50	16		
1986/87	13,361	0	300	13,611	50	17		
1987/88	11,737	0	500	12,197	40	15		
1988/89	11,000	0						
1989/90	15,000	0						

*Import requirements for India*

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
		----- <u>1,000 tons</u> -----				
Major cereals						
1988/89	142,300	140,660	150,776	(1,640)	8,476	23,999
1989/90	144,600	143,518	153,943	(1,082)	9,343	24,705
Vegetable oils						
1988/89	3,925	5,010	4,849	1,085	924	1,696
1989/90	3,900	5,112	4,942	1,212	1,042	1,835
Pulses						
1988/89	11,000	13,066	13,098	2,066	2,098	3,234
1989/90	15,000	13,331	13,768	(1,669)	(1,232)	(477)

*Financial indicators for India, actual and projected*

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
			<u>\$ million</u>			<u>Percent</u>
1980	15,080	17,469	2,224	6,858	12,856	6
1981	14,645	17,355	2,215	4,460	12,430	6
1982	14,258	16,508	2,852	4,965	11,406	7
1983	15,327	17,157	3,802	5,847	11,525	12
1984	16,193	18,258	3,640	6,110	12,553	13
1985	15,463	19,638	4,592	6,657	10,871	9
1986	16,935	19,564	5,378	6,729	11,557	5
1987	19,698	23,588	6,641	6,354	13,057	
1988	21,490	27,456	8,038	6,102	10,797	9
1989	24,108	30,359	8,493	6,655	12,587	9

*Additional food needs to support consumption for India, with stock adjustment and as constrained by maximum absorbable imports*

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>
Cereal equivalent						
Consumption						
1988/89	610	124	0	0	6,804	1,384
1989/90	820	145	0	0	3,399	599
Stock adjustment						
1988/89			2,973	605	2,973	605
1989/90			1,982	349	1,982	349
Total						
1988/89			723	147	9,777	1,989
1989/90			0	0	5,381	949
Vegetable oils						
1988/89	1,304	740	0	0	0	0
1989/90	1,521	863	0	0	0	0
Pulses						
1988/89	238	103	478	206	1,859	802
1989/90	288	120	0	0	0	0
Total						
1988/89		967		353		2,790
1989/90		1,127		0		949
Maximum absorbable						
Cereal equivalent						
1988/89			723	147	9,777	1,989
1989/90			0	0	5,381	949
Vegetable oils						
1988/89			0	0	0	0
1989/90			0	0	0	0
Pulses						
1988/89			478	206	1,859	802
1989/90			0	0	0	0
Total						
1988/89				353		2,790
1989/90				0		949

## Sri Lanka

Sri Lanka's rice production during 1989 is estimated at 1.42 million tons, 15 percent below 1988 and the lowest in a decade. A poor monsoon, coupled with civil unrest, has reportedly lowered area planted to the maha crop (March-harvested) and is expected also to result in lower yields for the yala crop (September-harvested). Vegetable oil supplies in 1989 are forecast to increase to 90,000 tons, as coconut production recovers from the 1987 drought, but rising domestic demand for fresh coconut lowers the volume of nuts crushed for oil. Root production is expected to keep pace with population growth and reach 665,000 tons in 1989/90.

During 1989/90, status quo consumption and nutrition-based cereal import requirements are estimated at 1.1 and 1.0 million tons, respectively. The tight rice situation is expected to lead to lower per capita rice consumption and higher wheat imports. Wheat, which is not grown in Sri Lanka, accounts for roughly one-fourth of cereal supplies.

Sri Lanka's balance of payments situation remains fragile, as unprecedented insurgency-related violence surrounded both

the presidential and parliamentary elections, held in December 1988 and February 1989, respectively. The resultant disruptions in power, communications, transportation, and harvesting have hurt the economy and are likely to reduce export earnings from the country's traditional commodities, tea, coconut, and rubber. Sri Lanka's commercial import capacity is weakened by high world commodity prices, heavy debt-service payments, and low international reserves.

Additional cereal needs to support status quo consumption during 1989/90 are estimated at 248,000 tons, up 23 percent from 1988/89. Because current consumption apparently exceeds the FAO/WHO recommended minimum caloric intake, the nutrition-based additional need estimate is marginally lower at 229,000 tons. To rebuild security stocks, an additional 6,000 tons of cereals are suggested.

On March 21, Sri Lanka made an international appeal for drought relief assistance, targeted at an estimated 1 million affected people, during the 6 months preceding the upcoming yala harvest. The United States has responded by offering a \$15 million P.L. 480, Title I wheat program (about 87,000 tons). This is in addition to the existing \$16 million P.L. 480 program.



*Sri Lanka basic food data*

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
	----- 1,000 tons -----					Kilos		Percent
Major cereals								
1980/81	1,450	254	692	2,198	0	148	Wheat	13.8
1981/82	1,469	198	663	2,142	0	141	Rice	42.0
1982/83	1,466	188	789	2,226	0	145	Cassava	3.0
1983/84	1,688	217	728	2,321	0	149	Vegetable	
1984/85	1,640	312	705	2,451	0	155	oils	3.5
1985/86	1,809	206	876	2,527	0	158	Total	62.3
1986/87	1,765	364	812	2,355	0	146		
1987/88	1,445	586	762	2,458	0	150		
1988/89	1,670	335						
1989/90	1,420	335						
Roots								
1980/81	500	0	0	500	0	34		
1981/82	526	0	0	526	0	35		
1982/83	573	0	0	573	0	37		
1983/84	722	0	0	722	0	46		
1984/85	683	0	0	683	0	43		
1985/86	598	0	0	598	0	37		
1986/87	615	0	0	615	0	38		
1987/88	630	0	0	630	0	38		
1988/89	650	0						
1989/90	665	0						
Vegetable oils								
1980/81	78	0	(5)	73	0	5		
1981/82	103	0	(35)	68	0	4		
1982/83	87	0	(26)	61	0	4		
1983/84	37	0	1	38	0	2		
1984/85	130	0	(63)	67	0	4		
1985/86	150	0	(68)	82	0	5		
1986/87	72	0	12	84	0	5		
1987/88	55	0	5	60	0	4		
1988/89	75	0						
1989/90	90	0						

*Import requirements for Sri Lanka*

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
		<u>1,000 tons</u>				
Major cereals						
1988/89	1,670	2,448	2,432	778	762	1,211
1989/90	1,420	2,482	2,442	1,062	1,022	1,498
Roots						
1988/89	650	653	599	3	(51)	120
1989/90	665	662	609	(3)	(56)	115
Cereal equivalent						
1988/89	1,925	2,704	2,666	780	741	1,200
1989/90	1,681	2,742	2,681	1,061	1,000	1,484
Vegetable oils						
1988/89	75	68	75	(7)	(0)	11
1989/90	90	69	80	(21)	(10)	(2)

*Financial indicators for Sri Lanka, actual and projected*

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
					<u>\$ million</u>	
					<u>Percent</u>	
1980	205	308	10	15	195	10
1981	154	269	10	17	145	8
1982	146	233	9	17	137	16
1983	167	241	14	16	152	11
1984	192	258	20	27	172	19
1985	181	293	38	23	142	30
1986	192	307	35	23	157	17
1987	200	310	64	16	137	
1988	210	300	31	12	169	22
1989	220	310	32	12	176	22

*Additional food needs to support consumption for Sri Lanka, with stock adjustment and as constrained by maximum absorbable imports*

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>	<u>1,000 tons</u>	<u>\$ million</u>
Cereal equivalent						
Consumption						
1988/89	491	80	202	33	189	31
1989/90	650	92	248	35	229	32
Stock adjustment						
1988/89			92	15	92	15
1989/90			6	1	6	1
Total						
1988/89			294	48	281	46
1989/90			253	36	235	33
Vegetable oils						
1988/89	16	10	0	0	0	0
1989/90	20	11	0	0	0	0
Total						
1988/89		90		48		46
1989/90		103		36		33
Maximum absorbable						
Cereal equivalent						
1988/89			294	48	281	46
1989/90			253	36	235	33
Vegetable oils						
1988/89			0	0	0	0
1989/90			0	0	0	0
Total						
1988/89				48		46
1989/90				36		33

## Glossary

Status quo	A measure of per capita food availability in recent years
Nutrition-based	Per capita food availability sufficient to meet internationally accepted minimum caloric standards
Cereal equivalent	Cereal required to meet shortfalls in both cereals and roots and tubers
Import requirement	Imports necessary to achieve either status quo or nutrition-based food availability, including both commercial and concessional food shipments
Tons	Metric tons
Dollars	U.S. dollars unless otherwise specified
GNP	Gross national product
GDP	Gross domestic product





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